REMARKS

This Response is submitted in reply to the Final Office Action of September 27, 2006. Claims 1-29 are pending in the present application. By the present amendment, Claims 1 and 25 are amended. No new matter is introduced by any of these amendments. Please charge Deposit Account No. 02-1818 for any fees which are due and owing or to credit any overpayment.

Rejections Under 35 U.S.C. §112, first paragraph

The Action has rejected claims 1-31 under U.S.C. §112, first paragraph as failing to comply with the written description requirement. The Action alleges that the previous amendment, "coating a surface of the inlay with a compound, wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis" is new matter.

Applicant respectfully disagrees and directs the Examiner's attention to paragraph [0181]. This paragraph specifically states "Coating 610 has adhesive or bonding properties to immobilize and bond the inlay 600 to the exposed corneal surface 608." (emphasis added). This portion of the paragraph clearly discloses the coating as an adhesive that immobilizes the inlay to the cornea.

In light of the above, Applicant respectfully requests that the §112, first paragraph rejection be withdrawn.

Rejections Under 35 U.S.C. §112, second paragraph

The Action has rejected claims 1-31 under U.S.C. §112, second paragraph as being indefinite. The Action seems to suggest that Applicant recites compounds in the specification as exhibiting adhesive properties and then argues that these compounds are not adhesives.

Applicant respectfully disagrees. As notes above, the specification claims that the coating 610 can have adhesive or bonding properties. The specification further states that specific compounds fibronectin, collagen, vitronectin and polysaccharide have bonding properties. These compounds are not described as being adhesive compounds, but are merely bonding compounds that do not have adhesive properties. Furthermore, these are merely examples of compounds having bonding properties and are not the sole compounds contemplated by the present invention.

In light of these arguments, Applicant respectfully requests that the present rejection be withdrawn.

Rejections Under 35 U.S.C. §102(b)

Claims 1-2, 4-6, 11, 12, 16 and 17 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,851,003 to Lindstrom (the "Lindstrom patent"). The Action states that the Lindstrom patent teaches a method as recited in these claims.

Applicant submits that Claim 1 recites features not disclosed or suggested by the cited prior art. Specifically, Claim 1 is directed to, among other things, a method of treatment of refractive error in the eye, including the steps of separating a first surface of the first corneal layer from a second surface of the second corneal layer, forming a flap and exposing the second surface at an area that intersects the main optical axis and coating a surface of the inlay at least at an area that intersects the main optical axis with a compound (before or after implanting the inlay), wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis.

Lindstrom discloses implanting an intracorneal lens 10 in the corneal stroma of the eye. The intracorneal lens 10 has a basement coating membrane material 22 which provides for growth of the epithelium over the anterior surface 18 of the lens optic 12. However, it is respectfully submitted

that the coating of Lindstrom is not an adhesive. Adhesion is more advantageous than bonding though cellular growth for applications in which rapidly fixing the lens in place is desirable, such as outpatient ophthalmology procedures.

The Action argues that since the Lindstrom patent discloses bonding compounds, such hydrogel, fibronectin and Type IV collagen and since these are some of the same compounds disclosed in this application, the Lindstrom patent discloses an adhesive.

Applicant respectfully disagrees and as noted above, the present specification differentiates between a bonding compound and an adhesive compound. The compounds noted above in the Lindstrom patent are clearly bonding compounds. That is, these compounds promote growth of the epithelium over the anterior surface of the lens optic 12 – see Lindstrom patent col. 2, lines 9 to 14. There is no disclosure, teaching or suggestion in the Lindstrom patent that any of these materials provides an adhesive affect to the lens optic.

Furthermore, the Lindstrom patent differentiates between the use of these materials (called basement coating membrane materials in the Lindstrom patent) and surgically biocompatible broadbased adhesives. In col. 3, lines 19-22, the Lindstrom patent states that "[t]he edge 48 is inserted into an incision 64 providing a tight seal about the continuous ring through the use of surgical biocompatible broad-base adhesive." (emphasis added). Shortly thereafter, the Lindstrom continues, stating that "[s]ubsequently, the basement membrane material 54 provides for an enhanced growth of the epithelium over the lens optic 42."

One of ordinary skill in the art would understand that that the basement membrane material is used to assist in the ingrowth of epithelium over the lens optic. This ingrowth in accomplished by fostering growth of the epithelium into the fixation holes, thereby securing the lens in position (i.e.,

bonding the lens to the cornea). The bio-compatible broadbased adhesive is applied on the region where there are no fixation holes (i.e., the lens edge having a continuous ring).

Furthermore, Lindstrom discloses the use of an adhesive only around the periphery of the lens, but it is respectfully submitted that Lindstrom does not disclose or suggest coating a surface of the inlay with a compound, wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis. Applicant respectfully submits that having the adhesive coating at the optical axis of the eye is an improvement over having the adhesive only at the periphery as disclosed by Lindstrom because it reduces the likelihood of the formation of unwanted pockets, it increases the integrity of the adhesive coating, and it strengthens the adhesion between the cornea and the inlay. Thus, the present invention reduces the likelihood of follow procedures to correct these potential problems.

Therefore, Applicant submits that the Lindstrom patent does not discloses, teach or suggest all the element of independent claim 1 and its dependent claims.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 3, 8-9, 19-26 and 28-29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lindstrom in combination with U.S. Patent No. 4,842,599 to Bronstein ("Bronstein") and U.S. Patent No. 5,713,957 to Steele et al. ("Steele"). The Action states that the combination of these three references renders these claims obvious.

Applicant respectfully submits that the Bronstein and Steele patents do not overcome the deficiencies of the Lindstrom patent. Specifically neither reference discloses or suggests coating a surface of the inlay with a compound, wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis.

The Bronstein patent discloses a prosthetic cornea that replaces a cylindrical plug or portion of the cornea. Similar to Lindstrom, Bronstein discloses the use of an adhesive only around the periphery of the lens, but it is respectfully submitted that Bronstein does not disclose or suggest coating a surface of the inlay with a compound, wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis.

Steele discloses coating a lens with a material that promotes bonding by encouraging cellular growth or by encouraging cells to modify their exteriors to bond better with themselves and the material. However, it is respectfully submitted that the material of Steele, which merely encourages growth or alteration of cells, is not an adhesive. For at least these reasons, it is respectfully submitted that Steele does not disclose or suggest coating a surface of the inlay with a compound, wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis.

For at least these reasons, Applicant respectfully submits that Claim 1 and Claims 2-24 and 30, which depend from Claim 1, are each patentably distinguished over Lindstrom in view of Bronstein in further view of Steele and are in condition for allowance. For similar reasons, Applicant respectfully submits that Claim 25 and Claims 26-29 and 31, which depend from Claim 25, are each patentably distinguished over Lindstrom in view of Bronstein in further view of Steele and are in condition for allowance.

Claims 7, 10, 27, 30 and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Lindstrom patent in combination with the Bronstein and Steele patents and further in combination with U.S. Patent No. 5,332,802 to Kelman et al. ("Kelman"). The Action states that the combination of these references renders the above claims obvious.

Kelman discloses the production of a chemically modified, crosslinkable, telopeptide-containing, naturally crosslinked, solubilized collagen from tissue obtained from a human donor. However, it is respectfully submitted that Kelman does not disclose or suggest an adhesive. Kelman discloses cross-linking collagen using UV light to form an implant in situ. However, the collagen of Kelman is not an adhesive and it is not in any way adhering anything together. Therefore, it is further respectfully submitted that Kelman does not disclose or suggest coating a surface of the inlay with a compound, wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis.

For at least these reasons, Applicant respectfully submits that Claims 7, 10, 27, 30 and 31 are each patentably distinguished over Lindstrom in view of Bronstein in further view of Steele in still further view of Kelman and are in condition for allowance.

Claim 14 is rejected under 35 U.S.C. §103(a) as being unpatentable over the Lindstrom patent in combination with the Bronstein and Steele patents and further in combination with U.S. Patent No. 5,964,748 to Peyman ("Peyman '748"). The Action states that the combination of these references renders the above claim obvious.

Peyman '748 discloses modifying the cornea using ablation and/or insertion of ocular material in the cornea. However, Applicant respectfully submits that Peyman '748 does not disclose or suggest adhesive. Therefore, it is respectfully submitted that Peyman '748 does not disclose or suggest coating a surface of the inlay with a compound, wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis.

For at least these reasons, Applicant respectfully submits that Claim 14 is patentably distinguished over Lindstrom in view of Bronstein in further view of Steele in still further view of Peyman '748 and is in condition for allowance.

Claims 13 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over the Lindstrom patent in combination with the Bronstein and Steele patents and further in combination with U.S. Patent No. 5,919,185 to Peyman ("Peyman '185"). The Action states that the combination of these references renders the above claim obvious.

Peyman '185 discloses directing a laser beam onto certain portions of a blank, so that the laser beam ablates those portions and thus reshapes the blank. However, Applicant respectfully submits that Peyman '185 does not disclose or suggest adhesive. Therefore, it is respectfully submitted that Peyman '185 does not disclose or suggest coating a surface of the inlay with a compound, wherein the compound is an adhesive that adheres the inlay to the cornea at the area that intersects the main optical axis.

For at least these reasons, Applicant respectfully submits that Claims 13 and 18 are each patentably distinguished over Lindstrom in view of Bronstein in further view of Steele in still further view of Peyman '185 and are in condition for allowance.

An earnest endeavor has been made to place this application in condition for formal allowance and is courteously solicited. If the Examiner has any questions regarding this Response, Applicants respectfully request that the Examiner contact the undersigned.

Respectfully submitted,

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